And with that, of course, Dr. Paine, we will start with you, and we will be delighted to hear from you.

STATEMENT OF DR. THOMAS O. PAINE, CHAIRMAN, NATIONAL COMMISSION ON SPACE; ACCOMPANIED BY DR. LAUREL L. WILKENING, VICE CHAIRMAN; DR. GEORGE B. FIELD; DR. JACK L. KERREBROCK; AND DR. KATHRYN D. SULLIVAN, MEMBERS

Dr. PAINE. Thank you, Mr. Chairman.

I would like to open by thanking this committee on behalf of all of the members of the Commission, both the Commissioners and the staff, for the opportunity that you gave us to address these very difficult questions over the course of the past year.

We have had, of course, the tragedy of the *Challenger* in the midst of our deliberations, but I think in many ways perhaps as the nation pauses to regroup and rebuild our launch vehicle capability and reorganize NASA to strengthen it even further for the future, that this probably represents a very good time to take a look at the long range future of the American space program, and I think that your foresight in asking us to do this more than a year ago is certainly repaid by the chance today to take a good solid look at where we are going in space.

In many ways the Commission has served as the eyes and ears of this committee, perhaps. We have, as you pointed out, been across the length and breadth of the country, remote areas like Seattle, and we have also been even farther west, to Hawaii. We have been in the south to Florida, up to Boston, and through the middle part of the country, asking the experts in each place, but also soliciting from private citizens their views on the place of the space program in American society, where they would like to see the United States go in space, and we found it a very inspiring experience.

My own feeling about this is that in many ways the people of this country have run ahead of their leaders in Washington. I think we are indeed faced to some extent with a crisis of direction and pace, and we hope very much that our report will provoke a lively discussion that will allow people to focus on this question of where the United States should be going in space.

As you may know, Mr. Chairman, at the conclusion of this hearing we will be presenting our report to the President, if things go according to schedule, and this morning we appeared before the House committee. So today, July 22, constitutes the formal turning over of our findings to the Senate and the House and to the President.

I think it is not too much to say that more than a new launch vehicle or a replacement orbiter or a space station and perhaps even more important than an increased budget, the thing that NASA needs the most today is a new sense of purpose and new long range goals. Aimlessness and indecision are going to devastate our civilian space program. The crucial decisions that we need about next generation launch vehicles, about replacement orbiters, about the mix of manned and unmanned missions, about the mix of private and government investment—these

questions must be addressed, and all of these questions have an inordinate effect on other parts of our space program. The whole question of the future of our planetary exploration, our basic research, our fundamental science and space program, is being inordinately impacted by questions of what will be the funding.

So in a sense we meet at a very good time; I think a very timely review is certainly in order. And I believe that without high level vision and purpose and leadership, essentially we will have no future in space.

But nevertheless, we are convinced that the exploration of outer space and American leadership in this area is something that the American people overwhelmingly endorse. I think it is more a question of how to go about it, what level of funding is appropriate. These are the things that need to be addressed.

I would like to ask my associates, Dr. Laurel Wilkening and Dr. George Field, to make a short opening statement, after which we would like to make ourselves available for your questions.

And with your permission I will put a somewhat longer introductory statement into the record.

Senator Gorton. It will be included in the record as if read. [The statement follows:]

## REPORT OF THE NATIONAL COMMISSION ON SPACE

## **HEARING**

BEFORE THE

SUBCOMMITTEE ON SCIENCE, TECHNOLOGY, AND SPACE

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

**NINETY-NINTH CONGRESS** 

SECOND SESSION

ON

Report of the National Commission on Space

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